



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,468	07/10/2003	Kah-Ong Tan	59554 (71987)	9953
7590	11/30/2006		EXAMINER	
Mr. Peter F. Corless EDWARDS & ANGELL, LLP 101 Federal Street, Boston, MA 02110-1800				SELBY, GEVELL V
		ART UNIT	PAPER NUMBER	2622

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/618,468	TAN ET AL.
	Examiner	Art Unit
	Gevell Selby	2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 July 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 2, 4-7, 9, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyake et al., US 2002/0140837.**

In regard to claim 1, Miyake et al., US 2002/0140837, discloses a digital image capturing module assembly, which comprises:

a lens holder (see figure 15, element 11), which has one side defined as a focusing plane, and which is formed with a shouldered portion (see figure 16 element 10) on the lens holder's inner wall on the periphery of the focusing plane and is further formed with a grooved portion in the shouldered portion (see figure 16, element 17);

an adhesive layer (see figure 16, element 24), which is coated in the grooved portion in the shouldered portion of the lens holder; and

a photosensitive printed circuit board (see figure 13, elements 2 and 3), which is embedded in the space confined within the lens holder's inner wall over the shouldered portion, and which is adhered by means of the adhesive layer to the lens holder so as to be fixedly mounted on the lens holder with a sealed light-impenetrable quality at the junction between the photosensitive printed circuit board and the lens holder (see figure 16 and para 70-73).

In regard to claim 2, Miyake et al., US 2002/0140837, discloses the digital image capturing module assembly of claim 1, wherein the photosensitive printed circuit board is a CCD-based photosensitive printed circuit board (see para. 42).

In regard to claim 4, Miyake et al., US 2002/0140837, discloses the digital image capturing module assembly of claim 1, wherein the shouldered portion is dimensioned to a depth substantially equal to the thickness of the photosensitive printed circuit board (see figure 16).

In regard to claim 5, Miyake et al., US 2002/0140837, discloses the digital image capturing module assembly of claim 1, wherein the space confined within the lens holder's inner wall on the shouldered portion is dimensioned to be substantially equal to the area of the photosensitive printed circuit board (see figure 16).

In regard to claim 6, Miyake et al., US 2002/0140837, discloses a method for fabricating a digital image capturing module, comprising:

preparing a lens holder (see figure 15, element 11) having one side defined as a focusing plane, and which is formed with a shouldered portion (see figure 16, element 10) on the lens holder's inner wall on the periphery of the focusing plane

and is further formed with a grooved portion (see figure 16, element 17) in the shouldered portion (see para 64);

preparing a photosensitive printed circuit board (see figure 13 element 3 and para 69);

coating an adhesive layer (see figure 16, element 24) in the grooved portion in the shouldered portion of the lens holder (see para 70); and

embedding the photosensitive printed circuit board in the space confined within the lens holder's inner wall over the shouldered portion, and which is adhered by means of the adhesive layer to the lens holder so as to be fixedly mounted on the lens holder with a sealed light-impenetrable quality at the junction between the photosensitive printed circuit board and the lens holder (see figure 16 and para 70-73).

In regard to claim 7, Miyake et al., US 2002/0140837, discloses the method of claim 6, wherein the photosensitive printed circuit board is a CCD-based photosensitive printed circuit board (see para 42).

In regard to claim 9, Miyake et al., US 2002/0140837, discloses the method of claim 6, wherein the shouldered portion is dimensioned to a depth substantially equal to the thickness of the photosensitive printed circuit board (see figure 16).

In regard to claim 10, Miyake et al., US 2002/0140837, discloses the method of claim 6, wherein the space confined within the lens holder's inner wall on the shouldered portion is dimensioned to be substantially equal to the area of the photosensitive printed circuit board (see figure 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake et al., US 2002/0140837, in view of Chen, US 6,900,913.**

In regard to claims 3 and 8, Miyake et al., US 2002/0140837, discloses the digital image capturing module assembly and method of claims 1 and 6. The Miyake reference does not disclose wherein the photosensitive printed circuit board is a CMOS-based photosensitive printed circuit board.

Chen, US 6,900,913, discloses that CCD and CMOS image sensor are interchangeable as the image sensor on the circuit board of a image pickup module (see column 2, lines 21-26).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Miyake et al., US 2002/0140837, in view of Chen, US 6,900,913, wherein the photosensitive printed circuit board is a CMOS-based photosensitive printed circuit board, in order to lower the power consumption of the sensor.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2003/0016454, discloses an image pickup apparatus with an adhesive layer sealing the lens holder to the circuit board.

US 6,654,187, discloses a camera lens holder with a shoulder portion.

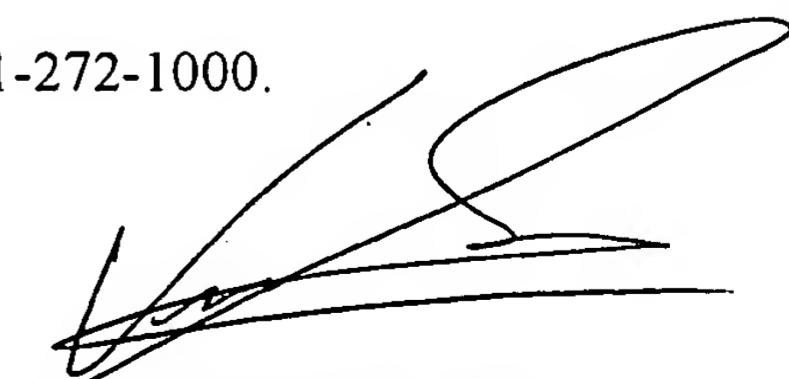
US 2004/0113048, discloses an image sensor with a lens barrel with a shoulder portion attached above an imaging region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600